

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 August 2003 (28.08.2003)

PCT

(10) International Publication Number
WO 03/070909 A2

(51) International Patent Classification⁷: **C12N**
(21) International Application Number: PCT/US03/05017
(22) International Filing Date: 20 February 2003 (20.02.2003)
(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
60/358,315 20 February 2002 (20.02.2002) US
(71) Applicant: **CHIRON CORPORATION** [US/US]; 4560
Horton Street, Emeryville, CA 94608 (US).

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC,
VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI,
SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, ML, MR, NE, SN, TD, TG).

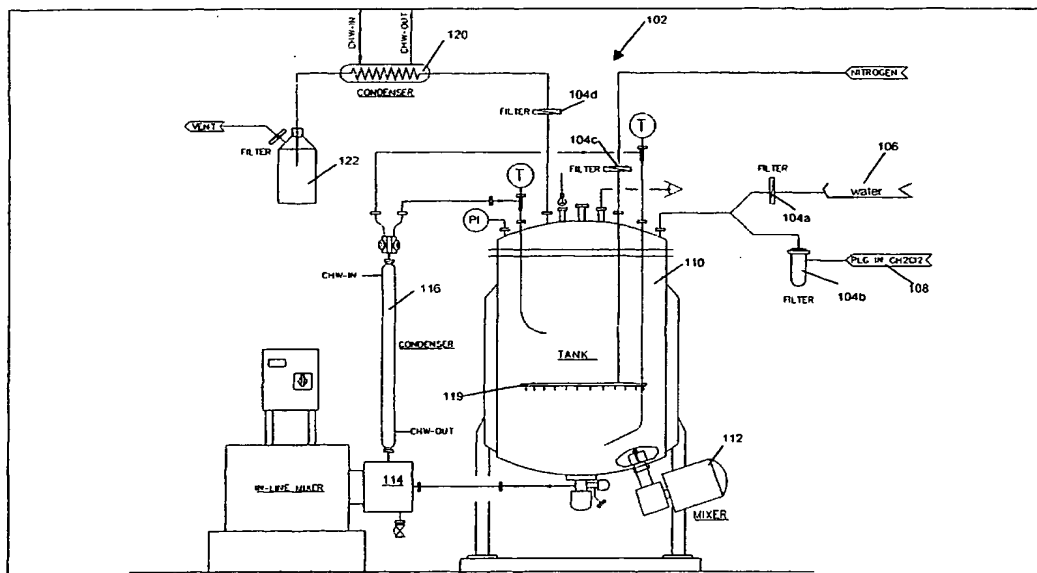
(72) Inventors: **O'HAGAN, Derek**; 2372 Woolsey Street,
Berkeley, CA 94705 (US). **SINGH, Manmohan**; 127
Pepperwood Street, Hercules, CA 94547 (US). **KAZZAZ,**
Jina; 1 Canada Court, San Rafael, CA 94903 (US).

Published:
— without international search report and to be republished
upon receipt of that report

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: MICROPARTICLES WITH ADSORBED POLYPEPTIDE-CONTAINING MOLECULES



(57) Abstract: Microparticles with adsorbed polypeptide-containing molecules formed without the use of surfactant, methods of making such microparticle compositions, and uses thereof, are disclosed. The microparticles comprise a polymer, such as a poly(α -hydroxy acid), a polyhydroxy butyric acid, a polycaprolactone, a polyorthoester, a polyanhydride, and the like. Preferred polymers are poly(D,L-lactide-co-glycolides), more preferably those having a lactide/glycolide molar ratio ranging from 40:60 to 60:40 and having a molecular weight ranging from 20,000 Daltons to 70,000 Daltons. Preferred polypeptide containing molecules are bacterial and viral antigens (including HIV antigens, meningitis B antigens, streptococcus B antigens, and Influenza A hemagglutinin antigens).



WO 03/070909 A2